

## EAST Search History

| Ref # | Hits | Search Query                 | DBs   | Default Operator | Plurals | Time Stamp       |
|-------|------|------------------------------|---|------------------|---------|------------------|
| L1    | 0    | S221 same S217               | US-PGPUB;<br>USPAT  | OR               | OFF     | 2006/03/16 17:36 |
|       |      | S208 same S216               | USPAT   | OR               | OFF     | 2006/03/16 17:33 |
|       |      | S197 same S198 same S200     | US-PGPUB;<br>USPAT  | OR               | OFF     | 2006/03/16 17:24 |
|       |      | S159 same S160               | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB           | OR               | OFF     | 2006/03/02 09:54 |
|       |      | S157 same S141               | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB           | OR               | OFF     | 2006/03/02 09:54 |
|       |      | seperate same S123           | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB           | OR               | OFF     | 2006/03/01 10:29 |
|       |      | S124 same S123               | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB           | OR               | OFF     | 2006/03/01 10:28 |
|       |      | S119 same S122               | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB           | OR               | OFF     | 2006/03/01 10:28 |
| L1    | 0    | "6268841".pn. and discharg\$ | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | OFF     | 2006/08/25 12:50 |
| L2    | 2    | "6268841".pn. and dis\$4     | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | OFF     | 2006/08/25 12:50 |

## EAST Search History

|     |         |                              |   |    |     |                  |
|-----|---------|------------------------------|---|----|-----|------------------|
| L3  | 0       | "6268841".pn. and disch\$4   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/08/25 12:52 |
| L4  | 2       | "20020030653".pn.            | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/08/25 12:52 |
| L5  | 2006003 | discharge\$4                 | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/08/25 12:52 |
| L6  | 0       | 4 and 5                      | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/08/25 12:54 |
| L7  | 0       | "6661402.pn" and 5           | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/08/25 12:54 |
| L8  | 0       | "6661402.pn"                 | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/08/25 12:54 |
| L9  | 1       | 5 and "6661402".pn.          | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/08/25 12:54 |
| L10 | 1       | "664912".ap. and discharge\$ | US-PGPUB;<br>USPAT  | OR | OFF | 2006/08/25 13:29 |
| L11 | 8191    | storage adj capacitors\$     | US-PGPUB;<br>USPAT  | OR | OFF | 2006/08/25 13:29 |
| L12 | 760081  | discharg\$                   | US-PGPUB;<br>USPAT  | OR | OFF | 2006/08/25 13:29 |
| L13 | 620     | 11 with 12                   | US-PGPUB;<br>USPAT  | OR | OFF | 2006/08/25 13:30 |

## EAST Search History

|     |        |   |   |    |     |                  |
|-----|--------|---|---|----|-----|------------------|
| L14 | 28     | lcd and 13  | US-PGPUB;<br>USPAT                                      | OR | OFF | 2006/08/25 13:30 |
| S1  | 1544   | 345/98.ccls.  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 11:34 |
| S2  | 2394   | 345/204.ccls.   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/01/27 15:00 |
| S3  | 456    | 345/30.ccls.  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/01/27 15:00 |
| S4  | 142    | 345/80.ccls.  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/01/27 15:00 |
| S5  | 3251   | 345/87.ccls.  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/01/27 15:00 |
| S6  | 476    | 345/90.ccls.  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 11:38 |
| S7  | 7550   | S1 or S2 or S3 or S4 or S5 or S6                          | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/01/27 15:00 |
| S8  | 238751 | multiplexer or multi-plexer or<br>multi-plex or multiplex | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/10 13:00 |
| S9  | 88784  | dac or (digital near analog near<br>converter)            | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/01/27 15:01 |

## EAST Search History

|     |         |   |   |    |     |                  |
|-----|---------|---|---|----|-----|------------------|
| S10 | 128     | S7 and S8 and S9  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/01/27 15:05 |
| S11 | 5       | "664912".ap.  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/01/27 15:01 |
| S12 | 98      | lcd and S10   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 16:33 |
| S13 | 1870494 | driver or driving   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/01/27 15:07 |
| S14 | 90      | S12 and S13   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/01/27 15:08 |
| S15 | 39344   | demultiplexer or demulti-plexer or<br>demulti-plex or demultiplex         | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/10 13:01 |
| S16 | 41273   | de\$multiplexer or de\$multi-plexer or<br>de\$multi-plex or de\$multiplex | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/10 13:00 |
| S17 | 14      | S14 and S16   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/01/27 15:20 |
| S18 | 5500407 | second  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/10 13:00 |
| S19 | 66066   | multiplexers or multi-plexers or<br>multi-plexes or multiplexes           | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/10 13:00 |

## EAST Search History

|     |       |  |   |    |     |                  |
|-----|-------|--|---|----|-----|------------------|
| S20 | 15456 | de\$multiplexers or de\$multi-plexers or de\$multi-plexes or de\$multiplexes | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/10 13:01 |
| S21 | 14524 | demultiplexers or demulti-plexers or demulti-plexes or demultiplexes         | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/10 13:01 |
| S22 | 10247 | S19 and (S20 or S21)   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 11:28 |
| S23 | 1557  | 345/98.ccls.   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/10 13:01 |
| S24 | 2412  | 345/204.ccls.  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/10 13:01 |
| S25 | 456   | 345/30.ccls.   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/10 13:01 |
| S26 | 143   | 345/80.ccls.   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/10 13:01 |
| S27 | 3263  | 345/87.ccls.   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/10 13:01 |
| S28 | 477   | 345/90.ccls.   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/10 13:01 |
| S29 | 7587  | S23 or S24 or S25 or S26 or S27 or S28                                       | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/10 13:01 |

## EAST Search History

|     |         |                       |   |    |     |                  |
|-----|---------|-----------------------|---|----|-----|------------------|
| S30 | 16      | S29 and S22           | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/10 13:06 |
| S31 | 1857    | S18 near S19          | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/10 13:06 |
| S32 | 171     | S18 near (S20 or S21) | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/10 13:06 |
| S33 | 40      | S31 and S32           | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/10 13:07 |
| S34 | 2202551 | display\$             | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/10 13:07 |
| S35 | 5       | S33 and S34           | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/10 13:07 |
| S36 | 477     | 345/90.ccls.          | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 11:26 |
| S37 | 587     | 345/99.ccls.          | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 11:26 |
| S38 | 1315    | 345/100.ccls.         | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 11:27 |
| S39 | 2119    | S36 or S37 or S38     | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 11:27 |

## EAST Search History

|     |       |  |   |    |     |                  |
|-----|-------|--|---|----|-----|------------------|
| S40 | 1567  | 345/98.ccls.   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 11:27 |
| S41 | 2432  | 345/204.ccls.  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 11:27 |
| S42 | 459   | 345/30.ccls.   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 11:27 |
| S43 | 143   | 345/80.ccls.   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 11:27 |
| S44 | 3279  | 345/87.ccls.   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 11:27 |
| S45 | 477   | 345/90.ccls.   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 11:27 |
| S46 | 7632  | S40 or S41 or S42 or S43 or S44 or S45                                       | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 11:27 |
| S47 | 8606  | S39 or S46   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 14:09 |
| S48 | 66374 | multiplexers or multi-plexers or multi-plexes or multiplexes                 | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 11:28 |
| S49 | 15549 | de\$multiplexers or de\$multi-plexers or de\$multi-plexes or de\$multiplexes | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 11:28 |

## EAST Search History

|     |         |  |   |    |     |                  |
|-----|---------|--|---|----|-----|------------------|
| S50 | 14603   | demultiplexers or demulti-plexers or demulti-plexes or demultiplexes | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 11:28 |
| S51 | 10309   | S48 and (S49 or S50)   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 11:28 |
| S52 | 758664  | buffer   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 11:28 |
| S53 | 238116  | capacitors\$   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 11:30 |
| S54 | 3       | S47 and S52 and S53 and S51  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 11:30 |
| S55 | 71519   | "345"/\$.ccls.   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 16:36 |
| S56 | 7       | S55 and S51 and S52 and S53  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 11:58 |
| S57 | 8887245 | second or two  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 12:02 |
| S58 | 9367280 | S48 near\$3 S57  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 11:58 |
| S59 | 845266  | "level\$shifter" or shifter or shift or shifts                       | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 12:09 |



## EAST Search History

|     |        |                             |   |    |     |                  |
|-----|--------|-----------------------------|---|----|-----|------------------|
| S60 | 309911 | S58 same S59                | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 12:02 |
| S61 | 1805   | S47 and S60                 | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 12:02 |
| S62 | 1866   | second near S48             | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 12:02 |
| S63 | 8389   | second near multi\$plexer   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 12:03 |
| S64 | 707    | S63 same S59                | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 12:03 |
| S65 | 14     | S47 and S64                 | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 12:03 |
| S66 | 68897  | "level\$shifter" or shifter | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 12:09 |
| S67 | 4      | dac same S66 same S48       | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 12:10 |
| S68 | 415    | dac and S66 and S48         | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 13:53 |
| S69 | 9      | S47 and S68                 | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 12:10 |

## EAST Search History

|     |         |  |   |    |     |                  |
|-----|---------|--|---|----|-----|------------------|
| S70 | 5230073 | add or additional or included                  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 12:15 |
| S71 | 6165665 | S70 near\$2 S66                                | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 12:15 |
| S72 | 321     | S70 near S66                                   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 12:15 |
| S73 | 4       | S47 and S72                                    | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 12:15 |
| S74 | 1191168 | positive                                       | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 13:53 |
| S75 | 1030245 | negative                                       | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 13:53 |
| S76 | 89645   | dac or (digital near analog near<br>converter) | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 13:54 |
| S77 | 57      | (negative near S76) and (S74 near<br>S76)      | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 14:32 |
| S78 | 204549  | lcd  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 13:54 |
| S79 | 10      | S77 and S78                                    | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 13:54 |

## EAST Search History

|     |      |                   |   |    |     |                  |
|-----|------|-------------------|---|----|-----|------------------|
| S80 | 477  | 345/90.ccls.      | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 14:09 |
| S81 | 587  | 345/99.ccls.      | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 14:09 |
| S82 | 1315 | 345/100.ccls.     | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 14:09 |
| S83 | 2119 | S80 or S81 or S82 | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 14:09 |
| S84 | 1567 | 345/98.ccls.      | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 14:09 |
| S85 | 2432 | 345/204.ccls.     | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 14:09 |
| S86 | 459  | 345/30.ccls.      | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 14:09 |
| S87 | 143  | 345/80.ccls.      | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 14:09 |
| S88 | 3279 | 345/87.ccls.      | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 14:09 |
| S89 | 477  | 345/90.ccls.      | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 14:09 |

## EAST Search History

|     |        |  |   |    |     |                  |
|-----|--------|--|---|----|-----|------------------|
| S90 | 7632   | S84 or S85 or S86 or S87 or S88 or S89 | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 14:09 |
| S91 | 8606   | S83 or S90                             | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 14:09 |
| S92 | 8606   | S91                                    | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 14:09 |
| S93 | 2      | S92 and S77                            | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 14:33 |
| S94 | 3069   | (negative same S76) and (S74 same S76) | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 14:32 |
| S95 | 67     | S91 and S94                            | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 14:42 |
| S96 | 241    | S78 and S94                            | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 14:43 |
| S97 | 576517 | driver                                 | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 14:43 |
| S98 | 151    | S96 and S97                            | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 15:00 |
| S99 | 255    | S91 and S74 and S75 and S76            | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 15:00 |

## EAST Search History

|          |         |   |   |    |     |                  |
|----------|---------|---|---|----|-----|------------------|
| S10<br>0 | 151     | S98 and S97 and S78                                     | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 16:11 |
| S10<br>1 | 6000795 | less or reduce or cut or decrease                       | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 16:12 |
| S10<br>2 | 2674282 | (cost or price or ic or (integrated adj<br>circuits\$)) | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 16:16 |
| S10<br>3 | 504069  | S101 same S102  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/01 10:49 |
| S10<br>4 | 1191168 | positive  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 16:16 |
| S10<br>5 | 89645   | dac or (digital near analog near<br>converter)          | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 16:16 |
| S10<br>6 | 3069    | (negative same S105) and (S104<br>same S105)            | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 16:45 |
| S10<br>7 | 357     | S106 and S103   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 16:37 |
| S10<br>8 | 47      | lcd and S107  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 16:33 |
| S10<br>9 | 27      | "345"/\$.ccls. and S107                                 | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 16:36 |

## EAST Search History

|          |         |  |   |    |     |                  |
|----------|---------|--|---|----|-----|------------------|
| S11<br>0 | 1885439 | display  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 16:37 |
| S11<br>1 | 143     | S107 and S110                                  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 16:38 |
| S11<br>2 | 576517  | driver   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 16:38 |
| S11<br>3 | 74      | S111 and S112                                  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/02/27 16:38 |
| S11<br>4 | 0       | ("2005/0206629").URPN.                         | USPAT   | OR | OFF | 2006/02/27 16:38 |
| S11<br>5 | 0       | ("2005/0140618").URPN.                         | USPAT   | OR | OFF | 2006/02/27 16:39 |
| S11<br>6 | 0       | ("2003/0132907").URPN.                         | USPAT   | OR | OFF | 2006/02/27 16:42 |
| S11<br>7 | 0       | ("2003/0090451").URPN.                         | USPAT   | OR | OFF | 2006/02/27 16:42 |
| S11<br>8 | 57      | (negative near S105) and (S104<br>near S105)   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/01 10:28 |
| S11<br>9 | 1632132 | seperate or individual                         | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/01 10:29 |
| S12<br>0 | 1191839 | positive                                       | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/01 10:28 |
| S12<br>1 | 89716   | dac or (digital near analog near<br>converter) | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/01 10:49 |

## EAST Search History

|          |         |   |   |    |     |                  |
|----------|---------|---|---|----|-----|------------------|
| S12<br>2 | 57      | (negative near S121) and (S120 near S121)                 | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/01 10:28 |
| S12<br>3 | 57      | ((negative near S121) and (S120 near S121))               | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/01 10:31 |
| S12<br>4 | 1632132 | (seperate or individual)                                  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/01 10:28 |
| S12<br>5 | 0       | seperate same ((negative near S121) and (S120 near S121)) | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/01 10:29 |
| S12<br>6 | 1614    | S121 same polarity  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/01 10:49 |
| S12<br>7 | 6003491 | less or reduce or cut or decrease                         | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/01 10:49 |
| S12<br>8 | 2675688 | (cost or price or ic or (integrated adj circuits\$))      | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/01 10:49 |
| S12<br>9 | 504436  | S127 same S128  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/01 10:50 |
| S13<br>0 | 170     | S126 and S129   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/01 12:08 |
| S13<br>1 | 3682998 | data or scan  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/01 12:08 |

## EAST Search History

|          |         |   |   |    |     |                  |
|----------|---------|---|---|----|-----|------------------|
| S13<br>2 | 1883944 | driver or driving                               | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/01 12:08 |
| S13<br>3 | 21647   | S131 near S132                                  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/01 12:08 |
| S13<br>4 | 828     | S133 same polarity                              | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/01 12:09 |
| S13<br>5 | 204726  | lcd   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/01 12:09 |
| S13<br>6 | 451     | S134 and S135                                   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/01 12:09 |
| S13<br>7 | 1135    | S133 same (polarity or (positive and negative)) | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/01 12:10 |
| S13<br>8 | 561     | S137 and S135                                   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:00 |
| S13<br>9 | 2       | "20020030653".pn.                               | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:06 |
| S14<br>0 | 301617  | polarity  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:00 |
| S14<br>1 | 870150  | polarity or (positive and negative)             | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:54 |



## EAST Search History

|          |       |  |   |    |     |                  |
|----------|-------|--|---|----|-----|------------------|
| S14<br>2 | 0     | S139 and S141  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:00 |
| S14<br>3 | 2     | "6268841".pn.  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:06 |
| S14<br>4 | 0     | S143 and S141  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:06 |
| S14<br>5 | 0     | "4571584".pn. and S141   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:07 |
| S14<br>6 | 1     | "6950045".pn. and S141   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:15 |
| S14<br>7 | 66513 | multiplexers or multi-plexers or<br>multi-plexes or multiplexes                    | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:15 |
| S14<br>8 | 15596 | de\$multiplexers or de\$multi-plexers<br>or de\$multi-plexes or<br>de\$multiplexes | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:15 |
| S14<br>9 | 162   | capacitors\$ and buffer and S147<br>and S148                                       | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:24 |
| S15<br>0 | 420   | lever near shifter\$3  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:15 |
| S15<br>1 | 11088 | level near shifter\$3  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:15 |

## EAST Search History

|          |         |  |   |    |     |                  |
|----------|---------|--|---|----|-----|------------------|
| S15<br>2 | 76185   | shifter\$3   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:16 |
| S15<br>3 | 9       | S149 and S152  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:16 |
| S15<br>4 | 205094  | lcd  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 13:16 |
| S15<br>5 | 11      | S149 and S154  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:19 |
| S15<br>6 | 7       | "345"/\$.ccls. and S149  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:54 |
| S15<br>7 | 1975322 | switches or switch or switchs or S147  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:54 |
| S15<br>8 | 1975322 | (switches or switch or switchs or S147)  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:54 |
| S15<br>9 | 1975322 | ((switches or switch or switchs or S147))  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:55 |
| S16<br>0 | 870150  | (polarity or (positive and negative))  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:54 |
| S16<br>1 | 91240   | (switches or switch or switchs or S147) same (polarity or (positive and negative)) | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:55 |

## EAST Search History

|          |       |  |   |    |     |                  |
|----------|-------|--|---|----|-----|------------------|
| S16<br>2 | 53777 | lcd and display and (driver or driving)      | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:55 |
| S16<br>3 | 1961  | S161 and S162                                | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:55 |
| S16<br>4 | 1583  | 345/98.ccls.                                 | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:56 |
| S16<br>5 | 2445  | 345/204.ccls.                                | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:56 |
| S16<br>6 | 459   | 345/30.ccls.                                 | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:56 |
| S16<br>7 | 143   | 345/80.ccls.                                 | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:56 |
| S16<br>8 | 3284  | 345/87.ccls.                                 | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:56 |
| S16<br>9 | 481   | 345/90.ccls.                                 | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:56 |
| S17<br>0 | 7663  | S164 or S165 or S166 or S167 or S168 or S169 | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 09:56 |
| S17<br>1 | 256   | S170 and S163                                | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 10:47 |

## EAST Search History

|          |      |   |   |    |     |                  |
|----------|------|---|---|----|-----|------------------|
| S17<br>2 | 2    | "20030132907".pn.                               | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/02 10:48 |
| S17<br>3 | 1323 | 345/100.ccls.                                   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 11:38 |
| S17<br>4 | 592  | 345/99.ccls.                                    | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 11:38 |
| S17<br>5 | 1593 | 345/98.ccls.                                    | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 11:39 |
| S17<br>6 | 2461 | 345/204.ccls.                                   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 11:39 |
| S17<br>7 | 461  | 345/30.ccls.                                    | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 11:39 |
| S17<br>8 | 144  | 345/80.ccls.                                    | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 11:39 |
| S17<br>9 | 3299 | 345/87.ccls.                                    | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 11:39 |
| S18<br>0 | 483  | 345/90.ccls.                                    | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 11:39 |
| S18<br>1 | 7706 | S175 or S176 or S177 or S178 or<br>S179 or S180 | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 11:39 |

## EAST Search History

|          |         |  |   |    |     |                  |
|----------|---------|--|---|----|-----|------------------|
| S18<br>2 | 8683    | S173 or S174 or S181                           | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 11:39 |
| S18<br>3 | 602542  | positive same negative                         | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 11:39 |
| S18<br>4 | 206595  | lcd  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 11:39 |
| S18<br>5 | 1891016 | driver or driving                              | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 11:39 |
| S18<br>6 | 828     | S182 and S183 and S184 and S185                | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 11:40 |
| S18<br>7 | 90232   | dac or (digital near analog near<br>converter) | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 11:40 |
| S18<br>8 | 1684    | positive with S187                             | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 11:40 |
| S18<br>9 | 1794    | negative with S187                             | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 11:40 |
| S19<br>0 | 1185    | S187 and S188 and S189                         | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 11:41 |
| S19<br>1 | 38      | S186 and S188 and S189                         | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 11:42 |

## EAST Search History

|          |         |  |   |    |     |                  |
|----------|---------|--|---|----|-----|------------------|
| S19<br>2 | 21      | (US-20020030653-\$ or<br>US-20040104873-\$ or<br>US-20020121997-\$ or<br>US-20050206629-\$ or<br>US-20030227428-\$ or<br>US-20030197672-\$ or<br>US-20030085859-\$).did. or<br>(US-6806859-\$ or US-6268841-\$ or<br>US-6731170-\$ or US-6963328-\$ or<br>US-6950045-\$ or US-6661402-\$ or<br>US-6747637-\$ or US-4571584-\$ or<br>US-7006072-\$ or US-6373459-\$ or<br>US-6784866-\$ or US-6750839-\$ or<br>US-6674420-\$ or US-6335721-\$).<br>did. | US-PGPUB;<br>USPAT                                      | OR | OFF | 2006/03/16 17:15 |
| S19<br>3 | 90232   | dac or (digital near analog near<br>converter)   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 13:17 |
| S19<br>4 | 1684    | positive with S193   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 13:17 |
| S19<br>5 | 1794    | negative with S193   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 13:17 |
| S19<br>6 | 13      | S194 and S195 and S192   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 13:17 |
| S19<br>7 | 1888109 | reduce or decrease   | US-PGPUB;<br>USPAT                                      | OR | OFF | 2006/03/16 17:42 |
| S19<br>8 | 90232   | dac or (digital near analog near<br>converter)   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/03/16 17:16 |
| S19<br>9 | 2560110 | S197 near\$3 S198  | US-PGPUB;<br>USPAT                                      | OR | OFF | 2006/03/16 17:16 |
| S20<br>0 | 55654   | (positive and negative) same S199  | US-PGPUB;<br>USPAT                                      | OR | OFF | 2006/03/16 17:25 |
| S20<br>1 | 54692   | "345"/\$.ccis.   | US-PGPUB;<br>USPAT                                      | OR | OFF | 2006/03/16 17:16 |
| S20<br>2 | 346     | lcd and S201 and S200  | US-PGPUB;<br>USPAT                                      | OR | OFF | 2006/03/16 17:17 |

## EAST Search History

|          |         |   |                    |    |     |                  |
|----------|---------|---|--------------------|----|-----|------------------|
| S20<br>3 | 1078    | (positive and negative) with S198                     | US-PGPUB;<br>USPAT | OR | OFF | 2006/03/16 17:19 |
| S20<br>4 | 56      | S202 and S203   | US-PGPUB;<br>USPAT | OR | OFF | 2006/03/16 17:24 |
| S20<br>5 | 1299    | S197 with S198  | US-PGPUB;<br>USPAT | OR | OFF | 2006/03/16 17:24 |
| S20<br>6 | 107755  | lcd   | US-PGPUB;<br>USPAT | OR | OFF | 2006/03/16 17:25 |
| S20<br>7 | 63      | S206 and S205   | US-PGPUB;<br>USPAT | OR | OFF | 2006/03/16 17:25 |
| S20<br>8 | 634609  | (positive and negative) or polarity                   | US-PGPUB;<br>USPAT | OR | OFF | 2006/03/16 17:34 |
| S20<br>9 | 36      | S207 and S208   | US-PGPUB;<br>USPAT | OR | OFF | 2006/03/16 17:25 |
| S21<br>0 | 0       | ("2003/0071779").URPN.                                | USPAT              | OR | OFF | 2006/03/16 17:26 |
| S21<br>1 | 0       | ("2003/0071779").URPN.                                | USPAT              | OR | OFF | 2006/03/16 17:28 |
| S21<br>2 | 922     | S197 with S198  | USPAT              | OR | OFF | 2006/03/16 17:28 |
| S21<br>3 | 38      | S212 and S206   | USPAT              | OR | OFF | 2006/03/16 17:33 |
| S21<br>4 | 1113774 | drive or driver or driving                            | USPAT              | OR | OFF | 2006/03/16 17:28 |
| S21<br>5 | 32      | S213 and S214   | USPAT              | OR | OFF | 2006/03/16 17:28 |
| S21<br>6 | 1853390 | S197 near\$2 S198                                     | USPAT              | OR | OFF | 2006/03/16 17:34 |
| S21<br>7 | 52246   | ((positive and negative) or polarity)<br>same S216    | US-PGPUB;<br>USPAT | OR | OFF | 2006/03/16 17:37 |
| S21<br>8 | 1591    | lcd and S217  | US-PGPUB;<br>USPAT | OR | OFF | 2006/03/16 18:01 |
| S21<br>9 | 70      | S197 near S198  | USPAT              | OR | OFF | 2006/03/16 17:34 |
| S22<br>0 | 1       | S217 and S206 and S219                                | USPAT              | OR | OFF | 2006/03/16 17:34 |
| S22<br>1 | 1720112 | ((positive and negative) or polarity)<br>near\$2 S198 | US-PGPUB;<br>USPAT | OR | OFF | 2006/03/16 17:36 |
| S22<br>2 | 52246   | S217 and S221   | US-PGPUB;<br>USPAT | OR | OFF | 2006/03/16 17:37 |
| S22<br>3 | 1591    | S222 and S206   | US-PGPUB;<br>USPAT | OR | OFF | 2006/03/16 17:37 |
| S22<br>4 | 1205    | S214 and S223   | US-PGPUB;<br>USPAT | OR | OFF | 2006/03/16 17:38 |

## EAST Search History

|          |         |   |   |    |     |                  |
|----------|---------|---|---|----|-----|------------------|
| S22<br>5 | 278     | S201 and S224   | US-PGPUB;<br>USPAT  | OR | OFF | 2006/03/16 17:38 |
| S22<br>6 | 3573221 | reduce or decrease or cut or<br>eliminate or lower          | US-PGPUB;<br>USPAT  | OR | OFF | 2006/03/16 17:43 |
| S22<br>7 | 212     | S226 near S198  | US-PGPUB;<br>USPAT  | OR | OFF | 2006/03/16 17:43 |
| S22<br>8 | 20      | S206 and S227   | US-PGPUB;<br>USPAT  | OR | OFF | 2006/03/16 17:43 |
| S22<br>9 | 36      | S219 and S208   | US-PGPUB;<br>USPAT  | OR | OFF | 2006/03/17 07:43 |
| S23<br>0 | 1       | "5170158".pn.   | US-PGPUB;<br>USPAT  | OR | OFF | 2006/03/17 08:52 |
| S23<br>1 | 5       | "664912".ap.  | US-PGPUB;<br>USPAT  | OR | OFF | 2006/08/25 13:27 |
| S23<br>2 | 5       | "664912".ap.  | US-PGPUB;<br>USPAT  | OR | OFF | 2006/08/25 11:23 |
| S23<br>3 | 4       | "653425".ap.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/08/25 09:42 |
| S23<br>4 | 2       | "20020030652".pn.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/08/25 09:43 |
| S23<br>5 | 2       | "20020030653".pn.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/08/25 09:43 |
| S23<br>6 | 174010  | multiplexer or multiplexing or (multi<br>adj plex\$) or mux | US-PGPUB;<br>USPAT  | OR | OFF | 2006/08/25 11:23 |
| S23<br>7 | 13879   | "345"/\$.ccls. and lcd                                      | US-PGPUB;<br>USPAT  | OR | OFF | 2006/08/25 11:24 |
| S23<br>8 | 1809    | S236 and S237   | US-PGPUB;<br>USPAT  | OR | OFF | 2006/08/25 11:24 |
| S23<br>9 | 45709   | data adj lines  | US-PGPUB;<br>USPAT  | OR | OFF | 2006/08/25 11:24 |
| S24<br>0 | 1914    | S236 with S239  | US-PGPUB;<br>USPAT  | OR | OFF | 2006/08/25 11:24 |
| S24<br>1 | 85      | S238 and S240   | US-PGPUB;<br>USPAT  | OR | OFF | 2006/08/25 11:25 |



## EAST Search History

|          |    |               |   |    |     |                  |
|----------|----|---------------|---|----|-----|------------------|
| S24<br>2 | 85 | S238 and S240 | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2006/08/25 12:50 |
|----------|----|---------------|---|----|-----|------------------|